

WHAT IS CLAIMED:

- 1 1. A computer system comprising:
2 a power supply for providing a voltage;
3 at least two boards, each board receiving the voltage, and wherein each board
4 comprises
5 at least one voltage regulator, for receiving the voltage and for providing a
6 regulated voltage level to the board, and
7 at least one processor for controlling the regulated voltage level.
- 1 2. The computer system of claim 1 wherein the processor monitors a value of at
2 least one power-related parameter on the board and controls the voltage regulator in such
3 a way as to influence a subsequent value of the at least one parameter.
- 1 3. The computer system of claim 2 wherein the processor, upon detection of a
2 fault associated with the at least one power related parameter, shuts down the board.
- 1 4. The computer system of claim 2 wherein the at least one power-related
2 parameter is a regulated voltage of the board.
- 1 5. The computer system of claim 2 wherein the at least one power-related
2 parameter is a temperature value of the board.
- 1 6. The computer system of claim 1 wherein each board further comprises a
2 signaling interface for receiving instructions therefrom, and wherein, the processor is
3 responsive to the received instructions for controlling the at least one voltage regulator.
- 1 7. The computers system of claim 6 wherein the processor causes data to be
2 written to a system log file, wherein the data is associated with the at least one power
3 related parameter.
- 1 8. The computers system of claim 1 further comprising an interface for coupling
2 to a console for receiving instructions therefrom for controlling various ones of the

3 processors on each of the at least two boards.

1 9. The computer system of claim 1 wherein the at least one power-related
2 parameter is a temperature value of the board and wherein the processor collects
3 temperature values over time for performing a time-based analysis of the collected
4 temperature values.

1 10. A computer system comprising:
2 a plurality of boards, each board comprising a power control element, wherein the
3 power control element comprises a regulator for providing a regulated voltage to the
4 board and a processor for monitoring and controlling the regulator; and
5 a signaling interface coupled to each power control element of each of the
6 plurality of boards for communicating data to, and from, each one of the processors.

1 11. The computer system of claim 10 wherein the processor for each board
2 monitors a value of at least one power-related parameter for its board and controls its
3 regulator in such a way as to influence a subsequent value of the at least one parameter.

1 12. The computer system of claim 11 wherein the processor for each board, upon
2 detection of a fault associated with the at least one power related parameter, shuts down
3 its board.

1 13. The computer system of claim 11 wherein the at least one power-related
2 parameter is a regulated voltage of the board.

1 14. The computer system of claim 11 wherein the at least one power-related
2 parameter is a temperature value of the board.

1 15. The computer system of claim 10 wherein the processor for each board is
2 responsive to instructions received from the signaling interface for controlling its
3 regulator.

1 16. The computers system of claim 10 wherein the processor for each board
2 causes data to be written to a system log file via the signaling interface and wherein the

3 data is associated with the at least one power related parameter of its board.

1 17. The computers system of claim 10 further comprising an interface for
2 coupling to a console for receiving instructions therefrom for controlling various ones of
3 the processors on each board.

1 18. The computers system of claim 10 further comprising a central controller
2 coupled to the signaling interface for controlling the processor on each of the plurality of
3 boards.

1 19. The computers system of claim 18 wherein the central controller causes data
2 to be written to a log file representative of information received, via the signaling
3 interface, with respect to at least one power related parameter of one of the plurality of
4 boards.

1 20. The computers system of claim 18 further comprising an interface for
2 coupling the central controller to a console for receiving instructions therefrom for
3 controlling various ones of the processors on each board.